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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,234	02/18/2004	John M. Gascoyne	12506US06	2366

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EXAMINER

YUAN, DAH WEI D

ART UNIT	PAPER NUMBER
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1745

MAIL DATE	DELIVERY MODE
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05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/781,234

Applicant(s)

GASCOYNE ET AL.

Examiner

Dah-Wei D. Yuan

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05212004</u> . | 6) <input type="checkbox"/> Other: ____. |

FUEL CELL ANODE STRUCTURES FOR VOLTAGE REVERSAL TOLERANCE

Examiner: Yuan

S.N. 10/781,234

Art Unit: 1745

May 11, 2007

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. both 119(e) and 120 as follows:

The second application must be an application for a patent for an invention which is also disclosed in the first application (the parent or provisional application); the disclosure of the invention in the parent application and in the second application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ 2d 1077 (Fed. Cir. 1994).

As a result, the recited subject matter in instant application receives the benefit of a filing date of 4/16/01.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Cabasso et al. (US 5,783,325).

Art Unit: 1745

With respect to claims 1,18-21, Cabasso et al. teach a fuel cell anode structure comprising a substrate and a carbon-based component comprising carbon blacks selected from the groups consisting of BLACK PEARLS 2000, Vulcan VX-72, KETJEN BLACK EC 300J, activated charcoal, Acetylene Black C-100, or mixtures thereof. See Column 6, Lines 36-58; Column 7, Lines 21-44. The BLACK PEARLS 2000 carbon material has a surface area of 1536 m²/g as disclosed in the instant specification. See Page 31. The Vulcan VX-72 carbon material has a surface area of 200 m²/g. See Example 1. The KETJEN BLACK EC 300J carbon material has a surface area of 950 m²/g. See Column 7, Lines 36-40. The activated charcoal typically has a surface area between 1000-1270 m²/g as evidenced by Yamaura et al. (US 6,824,908) and Hirashige (2005/0214631 A1). The Acetylene Black C-100 carbon material has a surface area of 60 m²/g. See Example 4. It is the position of the examiner that the probability of having a first carbon material having a BET surface area of at least 350 m²/g, such as BLACK PEARLS 2000, KETJEN BLACK EC 300J or activated charcoal, and a second carbon material, such as Vulcan VX-72 or Acetylene Black C-100 based on the teaching of Cabasso et al. does not constitute as “picking and choosing” because the groups for the mixture of two carbon materials are relatively small.

Furthermore, Cabasso et al. do not specifically disclose the relative corrosion resistance during cell reversal at fuel cell operating temperatures. However, it is the position of the examiner that such properties are inherent, given that both Cabasso et al. and the present application utilize the same carbon compound. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. In re Robertson, 49 USPQ2d 1949 (1999).

With respect to claim 2, Cabasso et al. teach the substrate is a gas diffusion layer. See Column 6, Lines 34-35.

With respect to claims 3-8,17, Cabasso et al. teach slurry of carbon materials and a binder (polyvinylidene fluoride) is cast onto a porous carbon cloth substrate. Care is taken to ensure that the slurry at least partially penetrated the cloth. See Column 6, Lines 36-47, Example 1.

With respect to claims 9-15, Cabasso et al. teach the application of protonated 117 Nafion solution onto the electrode followed by hot pressing to a Nafion membrane. See Column 10, Lines 25-30.

With respect to claim 16, Cabasso et al. teach a catalyst layer ink solution is painted onto the gas diffusion electrode. See Column 10, Lines 9-24.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1745

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan
May 11, 2007

A handwritten signature in black ink, appearing to read 'Dah-Wei D. Yuan', with a stylized flourish at the end.

DAH-WEI YUAN
PRIMARY EXAMINER